BRUHAT BANGALORE MAHANAGARA PALIKE
BYTARAYANPURA DIVISION

Name of Work:
Improvements to Road and Drains at Fathima Layout Main Road in Ward no.6 Byatarayanapura Sub Division

1ST& FINAL BILL

DETAILED-MEASUREMENT

TEJUS CONSULTANTS
CONSULTING ENGINEERS AND DESIGNERS
No.58 MIG, 6th Cross, 3rd Main
1st Stage, Basaveshwaranagar
Bangalore-560079
☎ 080 - 23287532
email: tejusconsultants@gmail.com

Scanned by CamScanner

Bruhat Bengaluru Mahanagara Palike

Bytarayanapura Division

Name of Agency :- M/S Sathya constructions.

Bill No :- 1st and Final Bill

Name Of work : - Improvements to Road and Drains at Fathima Layout Main Road in Ward no.6 Byatarayanapura Sub Division

Abstract Bill

BOQ Item No	Description / Chainage	Units	Nos	L(m)	B1(m)	B2(m)	B(m)	D(m)	Quantity	Rate	Amount
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)										
		Cum		Qty as per pre-measurement It No.1 P.No - 2					356.31	201.67	71857.04
2	Removing and refixing stone slabs of drains and pointing in CM (1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)										
		sqm		Qty as per pre-measurement It No.2 P.No 3-4					452.92	86.92	39367.81
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)										
		Sqm		Qty as per pre-measurement It No.3 P.No - 5					99.90	718.20	71748.18
4	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)										
		Cum		Qty as per pre-measurement It No.4 P.No 6					21.56	5770.78	124418.02
5	KSRB 4-6.1: Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specifcation No. KBS 4.6.2 (P.No.15, I.No.4.28 of PW, P&IWTD S.R 2016-17)										
		Cum		Qty as per pre-measurement It No.5 P.No - 7					58.80	264.18	15533.78
6	KSRB 4-6.4: Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surfaces such as walls at any thickness, including attached pilasters, buttresses, plinth and string courses cost of all materials, labour complete as per specifications. Specification No.KBS 4.6.2 (P.No.15, I.No.4.28 of PW, P&IWTD S.R 2016-17)										
		Sqm		Qty as per pre-measurement It No.6 P.No - 8					484.80	335.08	162446.78

CONSULTANTS

Assistant Engineer 15/05/2020

Assistant Executive Engineer

Scanned by CamScanner

BOQ Item No	Description / Chainage		Units	Nos	L(m)	B1(m)	B2(m)	B(m)	D(m)	Quantity	Rate	Amount
7	Providing and laying cement concrete using 20 mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete (RMC) M 20 for R.C.C works laid in 15 cms thick layers and well compacted vibrating, curing, for raft foundation column footing , main and secondary beams with all lead and lifts etc., complete (exclusive of cost of steel and fabrication charges.)Ready mixed concrete M20 for Raft foundation,column,footing,main and secondary beams(P.No.18, I.No 4.48 of PW, P&IWTD S.R 2016-17)											
			Cum	Qty as per pre-measurement It No.7 P.No - 9						63.62	6723.42	427710.36
8	KSRB - 4.9.2: Providing TMT steel Fe500 reinforcement for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3. (P.No.17, I.No.4.46.2 of PW, P&IWTD S.R 2016-17)											
			Tonne	Qty as per pre-measurement It No.8 P.No \1						2.74	79505.44	217844.91
21	Providing and fixing RCC Precast cover slab of 100mm thick for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)											
	1st main rd (ICICI bank)											
	RHS											
	0.00	15.00		1	15.00			0.90		13.50		
	15.00	30.00		1	15.00			0.90		13.50		
	30.00	45.00		1	15.00			0.90		13.50		
	45.00	60.00		1	15.00			0.90		13.50		
	60.00	75.00		1	15.00			0.90		13.50		
	75.00	90.00		1	15.00			0.90		13.50		
	90.00	105.00		1	15.00			0.90		13.50		
	105.00	122.00		1	17.00			0.90		15.30		
	128.00	143.00		1	15.00			0.90		13.50		
	143.00	156.00		1	13.00			0.90		11.70		
	LHS											
	128.00	143.00		1	15.00			0.90		13.50		
	143.00	158.00		1	15.00			0.90		13.50		
	158.00	169.00		1	11.00			0.90		9.90		
	1st cross Rd											
	0.00	15.00		1	15.00			0.60		9.00		
	15.00	30.00		1	15.00			0.60		9.00		
	30.00	40.00		1	10.00			0.60		6.00		
	3rd cross Rd											
	0.00	15.00		1	15.00			0.60		9.00		
	15.00	30.00		1	15.00			0.60		9.00		
			Sqm						Total Qty	213.90		
									Qty Limited to	181.80	1960.36	356393.45

CONSULTANTS

Assistant Engineer

Assistant Executive Engineer

Scanned by CamScanner

BOQ Item No	Description / Chainage	Units	Nos	L(m)	B1(m)	B2(m)	B(m)	D(m)	Quantity	Rate	Amount
24	KSRRB M2100-1.1. Earth work in excavation for foundation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications I. Ordinary soil - A . Manual Means (i) Depth upto 3m MORTH Specification No. 304 (P.No.209, I.No.27.1 of PW, P&IWTD S.R 2016-17)										
		cum		Qty as per pre-measurement It No. 24 P.No 12					74.24	248.56	18453.09
25	KSRB 2.8 . Providing and Filling in foundation with granite / trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift, complete as per specifications specification. No. KBS (P.No.6, I.No.2.15 of PW, P&IWTD S.R 2016-17)										
		cum		Qty as per pre-measurement It No. 25 P.No 13					13.92	2417.64	33653.55
26	KSRRB M2100-13. Plain / Reinforced Cement Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MORTH Specification No. 1500,1700 & 2100 (P.No.211, I.No.27.24 of PW, P&IWTD S.R 2016-17)										
		cum		Qty as per pre-measurement It No. 26 P.No 14					5.52	6492.56	35838.93
27	Diversion of water course by providing Coffer dams or bunds or islands as may be necessary for piers and abutments foundations, bailing out or pumping water during excavation and until completion etc., complete. - - beyond 1.50 mtrs depth upto & including 3m depth. (P.No.257, I.No.37.41.2 of PW, P&IWTD S.R 2016-17)										item not operated
		sqm				Total			0.00	377.40	0.00
28	KSRRB M2100-20.2. Plain / Reinforced Cement Concrete in Open Foundation with OPC cement design mix M35 @ 390kgs, with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008. case II : With Batching Plant, Transit Mixer and Concrete Pump MORTH Specification No. 1500,1700 & 2100 (P.No.213, I.No.27.37. of PW, P&IWTD S.R 2016-17)										
		cum		Qty as per pre-measurement It No. 28 P.No 15					12.25	7377.58	90375.36
29	KSRRB M2200-5.18.Design mix M35 with OPC cement @ 390kgs, with 20mm and down size graded granite metal coarse aggregates @0.68cum and fine aggregates @ 0.45cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 - i) U pto 5m height, (P.No.214, I.No.28.7.18 of PW, P&IWTD S.R 2016-17)										
		cum		Qty as per pre-measurement It No. 29 P.No 16					21.30	8310.79	177019.83

CONSULTANTS

15/05/2020
Assistant Engineer
ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

15/5/2020
Assistant Executive Engineer
ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-26

Scanned by CamScanner

BOQ Item No	Description / Chainage	Units	Nos	L(m)	B1(m)	B2(m)	R(m)	D(m)	Quantity	Rate	Amount
30	KSRRB M2200- TMT/MS Bar Reinforcement KSRRB M2200.6 Supplying, fitting and placing TMT bar reinforcement in sub-structure complete as per drawing and Technical Specifications complete as per specificationsMORTH Specification No.1600 & 2200 - TMT Bars Fe 500 (P.No.214, I.No.28.8.2 of PW, P&IWTD S.R 2016-17)										
		cum	Qty as per pre measurement It No.30 P.No 17						3.72	62673.43	233145.16
10	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)										
		Cum	Qty as per pre measurement It No.10 P.No 18						265.47	160.50	42607.94
11	KSRRB M 400-17. Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)										
		Cum	Qty as per pre-measurement It No.11 P.No 19						212.11	1907.58	404624.42
12	KSRRB M 500-6. Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)										
		Sqm	Qty as per pre-measurement It No.12 P.No 20						1060.78	32.02	33966.18
13	KSRRB 500-2. Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH specification clause 501 (P.No.161 I.No.21.2 of PW,P&IWTD SR of 2016-17)										
		Sqm	Qty as per pre-measurement It No.13 P.No 21						850.00	3.43	2915.50
14	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)										
		Sqm	Qty as per pre-measurement It No.14 P.No 22						2071.10	13.72	28415.49

Assistant Engineer 15/05/2020

Assistant Executive Engineer 15/5/20

Scanned by CamScanner

BOQ Item No	Description / Chainage	Units	Nos	L(m)	B1(m)	B2(m)	B(m)	D(m)	Quantity	Rate	Amount
15	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications.. MORTH Specification No. 507 - using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No.163 of I.No.21.27.6 in PW,P&IWTD S.R 2016-17)										
		Sqm		Qty as per pre-measurement It No.15 P.No 24					8.00	7591.44	60740.63
16	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)										
	1st cross Rd										
	0.00	15.00		1	15.00	5.30	5.10	5.20	0.04	3.12	
	15.00	30.00		1	15.00	5.10	5.70	5.40	0.04	3.24	
	30.00	45.00		1	15.00	5.70	4.30	5.00	0.04	3.00	
	45.00	60.00		1	15.00	4.30	4.50	4.40	0.04	2.64	
	60.00	75.00		1	15.00	4.50	4.80	4.65	0.04	2.79	
	75.00	90.00		1	15.00	4.80	4.20	4.50	0.04	2.70	
	90.00	105.00		1	15.00	4.20	4.80	4.50	0.04	2.70	
	105.00	117.20		1	12.20	4.80	4.50	4.65	0.04	2.27	
	118.50	133.50		1	15.00	4.50	4.70	4.60	0.04	2.76	
	133.50	148.50		1	15.00	4.70	4.80	4.75	0.04	2.85	
	148.50	163.50		1	15.00	4.80	4.90	4.85	0.04	2.91	
	163.50	167.50		1	4.00	4.90	5.20	5.05	0.04	0.81	
	169.10	184.10		1	15.00	5.20	5.20	5.20	0.04	3.12	
	184.10	199.10		1	15.00	5.20	6.00	5.60	0.04	3.36	
	199.10	213.00		1	13.90	6.00	6.80	6.40	0.04	3.56	
	1st main rd(ICICI bank)										
	0.00	15.00		1	15.00	6.30	6.10	6.20	0.04	3.72	
	15.00	30.00		1	15.00	6.10	6.00	6.05	0.04	3.63	
	30.00	45.00		1	15.00	6.00	6.00	6.00	0.04	3.60	
	45.00	60.00		1	15.00	6.00	5.20	5.60	0.04	3.36	
	60.00	75.00		1	15.00	5.20	5.60	5.40	0.04	3.24	
	75.00	90.00		1	15.00	5.60	5.50	5.55	0.04	3.33	
	90.00	105.00		1	15.00	5.50	4.80	5.15	0.04	3.09	
	105.00	121.80		1	16.80	4.80	5.50	5.15	0.04	3.46	
	128.30	143.30		1	15.00	5.50	6.30	5.90	0.04	3.54	
	143.30	158.30		1	15.00	6.30	6.10	6.20	0.04	3.72	
	158.30	173.30		1	15.00	6.10	6.50	6.30	0.04	3.78	
	173.30	179.00		1	5.70	6.50	7.00	6.75	0.04	1.54	

Assistant Engineer

Assistant Executive Engineer

Scanned by CamScanner

BOQ Item No	Description		Units	Nos	L(m)	B1(m)	B2(m)	B(m)	D(m)	Quantity	Rate	Amount
	Chainage											
			Cum									
									Total	81.84		
									Qty Limited to	76.44	8645.87	660890.30
17	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)											
	Edge line											
	1st main rd(ICICI bank)											
	0.00	179.00		2	179.00							
	1st cross Rd											
	0.00	213.00		2	213.00			0.10		35.80		
								0.10		42.60		
			Sqm						Total	78.40		
									Qty Limited to	63.80	585.54	37357.45
											TOTAL	3347324.16

Consultant

Assistant Engineer 15/05/2020

Assistant Executive Engineer 15/5/2020

Scanned by CamScanner